

SeqListST25
SEQUENCE LISTING

<110> Cangene Corporation
Integrated BioTherapeutics, Inc.
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<120> EBOLA MONOCLONAL ANTIBODIES

<130> EMER-044/01WO

<150> US 61/941,775

<151> 2014-02-19

<160> 95

<170> PatentIn version 3.5

<210> 1

<211> 442

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<213> Mus sp.

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tgtgaagggc cggttcacca tcgccagaga caatgccaaag aataccctgc acctgcaaat	300
gagcagtctg aagtctgagg acacagccat gtattactgt gcaaccatt actacggccc	360
cctctatgct atggactact ggggtcaagg aacctcagtc accgtctcct cagccaaaac	420
gacaccccca tctgtctata ag	442

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Ser Leu Lys Leu Ser Cys Ala Ala Ser Gly Phe Ala Phe Ser Ser Tyr	30
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Asp Met Ser Trp Val Arg Gln Thr Pro Glu Lys Arg Leu Glu Trp Val	45
35 40	

Ala Tyr Ser Ser Arg Gly Gly Gly Phe Thr Tyr Tyr Pro Asp Thr Val	60
50 55	

Lys Gly Arg Phe Thr Ile Ala Arg Asp Asn Ala Lys Asn Thr Leu His	80
65 70 75	

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Leu Gln Met Ser Ser₈₅ Leu Lys Ser Glu Asp₉₀ Thr Ala Met Tyr Tyr₉₅ Cys

Ala Thr His Tyr₁₀₀ Tyr Gly Pro Leu Tyr₁₀₅ Ala Met Asp Tyr Trp₁₁₀ Gly Gln

Gly Thr Ser₁₁₅ Val Thr Val Ser Ser₁₂₀ Ala Lys Thr Thr Pro₁₂₅ Pro Ser

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 gtgcaccttg agtagtcagc acagtacgtt caccattgaa tggatcagc aacagccact 180
 caaggctcct aagtatgtga tggagcttaa gaaagatgga agccacagca cagggtgatgg 240
 gattcctgat cgcttctctg gatccagctc tgggtgctgat cgctaccttt ggatttccaa 300
 catccagcct gaagatgaag caatgtacat ctgtggtgtg ggtgatacaa ttaaggaaca 360
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Ile Glu Trp₃₅ Tyr Gln Gln Gln Pro₄₀ Leu Lys Ala Pro Lys₄₅ Tyr Val Met

Glu Leu Lys Lys Asp Gly Ser₅₅ His Ser Thr Gly Asp₆₀ Gly Ile Pro Asp

Arg Phe Ser Gly Ser Ser₇₀ Ser Gly Ala Asp Arg₇₅ Tyr Leu Trp Ile Ser₈₀

Asn Ile Gln Pro Glu₈₅ Asp Glu Ala Met Tyr₉₀ Ile Cys Gly Val Gly₉₅ Asp

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Thr Ile Lys Glu Gln Phe Val Tyr Val Phe Gly Gly Gly Thr Lys Val
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Thr Val Leu Gly Gln Pro Lys Ser Thr Pro
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<210> 8
 <211> 15
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 tcctcccca aaccctggat ttatgccact tccaacctgg cttctggagt cctgctcgc 180
 ttcagtggca gtgggtctgg gacctcttac tctctcaca tcagcagagt ggaggctgaa 240
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 accaagctgg caataaac 319

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 <212> PRT
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 20 25 30
 His Trp Tyr His Gln Asn Pro Gly Ser Ser Pro Lys Pro Trp Ile Tyr
 35 40 45
 Ala Thr Ser Asn Leu Ala Ser Gly Val Pro Ala Arg Phe Ser Gly Ser
 50 55 60
 Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser Arg Val Glu Ala Glu
 65 70 75 80
 Asp Ala Ala Thr Tyr Tyr Cys Gln Gln Trp Ser Ser Asn Pro Pro Thr
 85 90 95
 Phe Gly Gly Gly Thr Lys Leu Ala Ile Lys
 100 105

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<400> 13

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<210> 15
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<400> 15

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<210> 16
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<400> 16

Ala Thr Ser
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<210> 17
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 <212> DNA
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<213> Mus sp.

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<400> 21

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<211> 364

<212> DNA

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cctgggcagg gccttgagtg gattggatat attaatcctt acaatgatgg tcctaagtac 180

aatgagaagt tcaaaggcaa ggccacactg acttcagaca aatcctcccg cacagcctat 240

atggagctca gcagcctgac cactgaggac tctgcggtct ttactgtgc aagagggcgg 300

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tcag 364

<210> 23

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35 40 45Gly Tyr Ile Asn Pro Tyr Asn Asp Gly Pro Lys Tyr Asn Glu Lys Phe
50 55 60Lys Gly Lys Ala Thr Leu Thr Ser Asp Lys Ser Ser Arg Thr Ala Tyr
65 70 75 80Met Glu Leu Ser Ser Leu Thr Thr Glu Asp Ser Ala Val Phe Tyr Cys
85 90 95

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Ala Arg Gly Arg Gly Asp Ala Tyr Phe Tyr Val Leu Asp Tyr Trp Gly
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Gln Gly Thr Ser Val Thr Val Ser Ser
 115 120

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<210> 26
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<400> 26
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<400> 27
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<210> 28
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 <212> PRT
 <213> Mus sp.

<400> 28
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 1 5

<210> 29
 <211> 14
 <212> PRT
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 <212> DNA
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 gatcgcttca caggcagcgg atctgggaca gattttactc ttaccatcag cagtgtacaa 240
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 Glu Ile Val Leu Thr Gln Ser Pro Ala Leu Met Ala Ala Ser Pro Gly

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 Asn Leu His Trp Tyr Gln Gln Lys Ser Glu Thr Ser Pro Lys Pro Trp
 35 40 45
 Ile Tyr Gly Thr Ser Asn Leu Ala Ser Gly Val Pro Asp Arg Phe Thr
 50 55 60
 Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Val Gln
 65 70 75 80
 Ala Glu Asp Leu Thr Leu Tyr Tyr Cys His Gln Tyr Leu Ser Ser Trp
 85 90 95
 Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys
 100 105

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<400> 37
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<210> 38
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 <212> DNA
 <213> Mus sp.

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<210> 39
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<400> 39

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<210> 40
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<213> Mus sp.

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<210> 41

<211> 8

<212> PRT

<213> Mus sp.

<400> 41

His Gln Tyr Leu Ser Ser Trp Thr
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<210> 42

<211> 78

<212> DNA

<213> Mus sp.

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atcacctgca gtgtcagc 78

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<211> 51

<212> DNA

<213> Mus sp.

<400> 43

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<210> 44

<211> 108

<212> DNA

<213> Mus sp.

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cttaccatca gcagtgtaca agctgaagac ctgacacttt attactgt 108

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<400> 45

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<210> 46

<211> 358

<212> DNA

<213> Mus sp.

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acttgttctt tctctggggtt ttactgagt acttctggta tgagtgtagg ctggtttcgt 120

SeqListST25

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 tataatccag ccctgaaaag ccgtctcaca atctccaagg atacctccaa caaccaggta 240
 ttcctcaaga tcgccagtgt ggtcactgca gagagtgccata cataactactg tgctcgaata 300
 ggctatgatg gtccccctga ctattggggc caaggcacca ttttcacagt ctctcag 358

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 <212> PRT
 <213> Mus sp.

<400> 47

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Thr Leu Ser Leu Thr Cys Ser Phe Ser Gly Phe Ser Leu Ser Thr Ser
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Gly Met Ser Val Gly Trp Phe Arg Gln Pro Ser Gly Lys Gly Leu Glu
 35 40 45

Trp Leu Ala His Ile Trp Trp Thr Asp Asp Lys Tyr Tyr Asn Pro Ala
 50 55 60

Leu Lys Ser Arg Leu Thr Ile Ser Lys Asp Thr Ser Asn Asn Gln Val
 65 70 75 80

Phe Leu Lys Ile Ala Ser Val Val Thr Ala Glu Ser Ala Thr Tyr Tyr
 85 90 95

Cys Ala Arg Ile Gly Tyr Asp Gly Pro Pro Asp Tyr Trp Gly Gln Gly
 100 105 110

Thr Ile Phe Thr Val Ser Ser
 115

<210> 48
 <211> 30
 <212> PRT
 <213> Mus sp.

<400> 48

Gly Gly Gly Thr Thr Thr Thr Cys Ala Cys Thr Gly Ala Gly Thr Ala
 1 5 10 15

Cys Thr Thr Cys Thr Gly Gly Thr Ala Thr Gly Ala Gly Thr
 20 25 30

<210> 49
 <211> 21
 <212> PRT
 <213> Mus sp.

SeqListST25

<400> 49

Ala Thr Thr Thr Gly Gly Thr Gly Gly Ala Cys Thr Gly Ala Thr Gly
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Ala Thr Ala Ala Gly
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<210> 50

<211> 33

<212> PRT

<213> Mus sp.

<400> 50

Gly Cys Thr Cys Gly Ala Ala Thr Ala Gly Gly Cys Thr Ala Thr Gly
 1 5 10 15

Ala Thr Gly Gly Thr Cys Cys Cys Cys Cys Thr Gly Ala Cys Thr Ala
 20 25 30

Thr

<210> 51

<211> 10

<212> PRT

<213> Mus sp.

<400> 51

Gly Phe Ser Leu Ser Thr Ser Gly Met Ser
 1 5 10

<210> 52

<211> 7

<212> PRT

<213> Mus sp.

<400> 52

Ile Trp Trp Thr Asp Asp Lys
 1 5

<210> 53

<211> 11

<212> PRT

<213> Mus sp.

<400> 53

Ala Arg Ile Gly Tyr Asp Gly Pro Pro Asp Tyr
 1 5 10

<210> 54

<211> 75

<212> DNA

<213> Mus sp.

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 acttgttctt tctct 75

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<210> 56
 <211> 114
 <212> DNA
 <213> Mus sp.

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<400> 57
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<210> 58
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 <212> DNA
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 acgtgcacct tgagtagtca gcacagtacg ttcaccattg aatggatatca gcaacagcca 120
 ctcaaggctc ctaagtatgt gatggagctt aagaaagatg gaagccacag cacaggtgat 180
 gggattcctg atcgcttctc tggatccagc tctggtgctg atcgctacct ttggatttcc 240
 aacatccagc ctgaagatga agcaatgtac atctgtggtg tgggtgatac aattaaggaa 300
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<400> 59
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 Ser Ala Lys Leu Thr Cys Thr Leu Ser Ser Gln His Ser Thr Phe Thr
 20 25 30

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Ile Glu Trp Tyr Gln Gln Gln Pro Leu Lys Ala Pro Lys Tyr Val Met
 35 40 45

Glu Leu Lys Lys Asp Gly Ser His Ser Thr Gly Asp Gly Ile Pro Asp
 50 55 60

Arg Phe Ser Gly Ser Ser Ser Gly Ala Asp Arg Tyr Leu Trp Ile Ser
 65 70 75 80

Asn Ile Gln Pro Glu Asp Glu Ala Met Tyr Ile Cys Gly Val Gly Asp
 85 90 95

Thr Ile Lys Glu Gln Phe Val Tyr Val Phe Gly Gly Gly Thr Lys Val
 100 105 110

Thr Val Leu
 115

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<400> 61
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<210> 62
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<210> 63
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<400> 63

Ser Gln His Ser Thr Phe Thr
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<210> 64
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<400> 64

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<210> 65

<211> 13

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<213> Mus sp.

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<210> 66

<211> 75

<212> DNA

<213> Mus sp.

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acgtgcacct tgagt 75

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<211> 51

<212> DNA

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<400> 67

attgaatggg atcagcaaca gccactcaag gctcctaagt atgtgatgga g 51

<210> 68

<211> 108

<212> DNA

<213> Mus sp.

<400> 68

agcacagggtg atgggattcc tgatcgcttc tctggatcca gctctgggtgc tgatcgctac 60

ctttggattt ccaacatcca gcctgaagat gaagcaatgt acatctgt 108

<210> 69

<211> 31

<212> DNA

<213> Mus sp.

<400> 69

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<210> 70

<211> 361

<212> DNA

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<400> 70

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ccggagaaga ggctggagtg ggtcgcatac agtagtcgtg gtggtgggtt tacctactat 180

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ccagacactg tgaagggccg gttcaccatc gccagagaca atgccaagaa taccctgcac 240
 ctgcaaatga gcagtctgaa gtctgaggac acagccatgt attactgtgc aaccattac 300
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<210> 71
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<400> 71

Glu Arg Gln Leu Val Glu Ser Gly Gly Gly Val Val Lys Pro Gly Glu
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Ser Leu Lys Leu Ser Cys Ala Ala Ser Gly Phe Ala Phe Ser Ser Tyr
 20 25 30

Asp Met Ser Trp Val Arg Gln Thr Pro Glu Lys Arg Leu Glu Trp Val
 35 40 45

Ala Tyr Ser Ser Arg Gly Gly Gly Phe Thr Tyr Tyr Pro Asp Thr Val
 50 55 60

Lys Gly Arg Phe Thr Ile Ala Arg Asp Asn Ala Lys Asn Thr Leu His
 65 70 75 80

Leu Gln Met Ser Ser Leu Lys Ser Glu Asp Thr Ala Met Tyr Tyr Cys
 85 90 95

Ala Thr His Tyr Tyr Gly Pro Leu Tyr Ala Met Asp Tyr Trp Gly Gln
 100 105 110

Gly Thr Ser Val Thr Val Ser Ser
 115 120

<210> 72
 <211> 24
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<400> 72

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<210> 73
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<400> 73

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<210> 74

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<211> 39
 <212> DNA
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<400> 74
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39

<210> 75
 <211> 8
 <212> PRT
 <213> Mus sp.

<400> 75

Gly Phe Ala Phe Ser Ser Tyr Asp
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<210> 76
 <211> 8
 <212> PRT
 <213> Mus sp.

<400> 76

Ser Ser Arg Gly Gly Gly Phe Thr
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<210> 77
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 <213> Mus sp.

<400> 77

Ala Thr His Tyr Tyr Gly Pro Leu Tyr Ala Met Asp Tyr
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 <212> DNA
 <213> Mus sp.

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tcctgtgcag cctct

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 <212> DNA
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51

<210> 80
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 <212> DNA
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<400> 81
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<210> 82
 <211> 487
 <212> PRT
 <213> Artificial Sequence

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<400> 82

Met Gly Val Thr Gly Ile Leu Gln Leu Pro Arg Asp Arg Phe Lys Arg
 1 5 10 15

Thr Ser Phe Phe Leu Trp Val Ile Ile Leu Phe Gln Arg Thr Phe Ser
 20 25 30

Ile Pro Leu Gly Val Ile His Asn Ser Thr Leu Gln Val Ser Asp Val
 35 40 45

Asp Lys Leu Val Cys Arg Asp Lys Leu Ser Ser Thr Asn Gln Leu Arg
 50 55 60

Pro Val Gly Leu Asn Leu Glu Gly Asn Gly Val Ala Thr Asp Val Pro
 65 70 75 80

Ser Ala Thr Lys Arg Trp Gly Phe Arg Ser Gly Val Pro Pro Lys Val
 85 90 95

Val Asn Tyr Glu Ala Gly Glu Trp Ala Glu Asn Cys Tyr Asn Leu Glu
 100 105 110

Ile Lys Lys Pro Asp Gly Ser Glu Cys Leu Pro Ala Ala Pro Asp Gly
 115 120 125

Ile Arg Gly Phe Pro Arg Cys Arg Tyr Val His Lys Val Ser Gly Thr
 130 135 140

Gly Pro Cys Ala Gly Asp Phe Ala Phe His Lys Glu Gly Ala Phe Phe
 145 150 155 160

Leu Tyr Asp Arg Leu Ala Ser Thr Val Ile Tyr Arg Gly Thr Thr Phe
 165 170 175

Ala Glu Gly Val Val Ala Phe Leu Ile Leu Pro Gln Ala Lys Lys Asp

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180

185

190

Phe Phe Ser Ser His Pro Leu Arg Glu Pro Val Asn Ala Thr Glu Asp
 195 200 205

Pro Ser Ser Gly Tyr Tyr Ser Thr Thr Ile Arg Tyr Gln Ala Thr Gly
 210 215 220

Phe Gly Thr Asn Glu Thr Glu Tyr Leu Phe Glu Val Asp Asn Leu Thr
 225 230 235 240

Tyr Val Gln Leu Glu Pro Arg Phe Thr Pro Gln Phe Leu Leu Gln Leu
 245 250 255

Asn Glu Thr Ile Tyr Thr Ser Gly Lys Arg Ser Asn Thr Thr Gly Lys
 260 265 270

Leu Ile Trp Lys Val Asn Pro Glu Ile Asp Thr Thr Ile Gly Glu Trp
 275 280 285

Ala Phe Trp Glu Thr Lys Lys Asn Leu Thr Arg Lys Ile Arg Ser Glu
 290 295 300

Glu Leu Ser Phe Thr Val Val Ser Asn Thr His His Gln Asp Thr Gly
 305 310 315 320

Glu Glu Ser Ala Ser Ser Gly Lys Leu Gly Leu Ile Thr Asn Thr Ile
 325 330 335

Ala Gly Val Ala Gly Leu Ile Thr Gly Gly Arg Arg Thr Arg Arg Glu
 340 345 350

Ala Ile Val Asn Ala Gln Pro Lys Cys Asn Pro Asn Leu His Tyr Trp
 355 360 365

Thr Thr Gln Asp Glu Gly Ala Ala Ile Gly Leu Ala Trp Ile Pro Tyr
 370 375 380

Phe Gly Pro Ala Ala Glu Gly Ile Tyr Thr Glu Gly Leu Met His Asn
 385 390 395 400

Gln Asp Gly Leu Ile Cys Gly Leu Arg Gln Leu Ala Asn Glu Thr Thr
 405 410 415

Gln Ala Leu Gln Leu Phe Leu Arg Ala Thr Thr Glu Leu Arg Thr Phe
 420 425 430

Ser Ile Leu Asn Arg Lys Ala Ile Asp Phe Leu Leu Gln Arg Trp Gly
 435 440 445

Gly Thr Cys His Ile Leu Gly Pro Asp Cys Cys Ile Glu Pro His Asp

SeqListST25
460

450

455

Trp Thr Lys Asn Ile Thr Asp Lys Ile Asp Gln Ile Ile His Asp Phe
465 470 475 480

Val Asp Lys Thr Leu Pro Asp
485

<210> 83

<211> 487

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Ebolavirus GP

<400> 83

Met Gly Gly Leu Ser Leu Leu Gln Leu Pro Arg Asp Lys Phe Arg Lys
1 5 10 15

Ser Ser Phe Phe Val Trp Val Ile Ile Leu Phe Gln Lys Ala Phe Ser
20 25 30

Met Pro Leu Gly Val Val Thr Asn Ser Thr Leu Glu Val Thr Glu Ile
35 40 45

Asp Gln Leu Val Cys Lys Asp His Leu Ala Ser Thr Asp Gln Leu Lys
50 55 60

Ser Val Gly Leu Asn Leu Glu Gly Ser Gly Val Ser Thr Asp Ile Pro
65 70 75 80

Ser Ala Thr Lys Arg Trp Gly Phe Arg Ser Gly Val Pro Pro Lys Val
85 90 95

Val Ser Tyr Glu Ala Gly Glu Trp Ala Glu Asn Cys Tyr Asn Leu Glu
100 105 110

Ile Lys Lys Pro Asp Gly Ser Glu Cys Leu Pro Pro Pro Pro Asp Gly
115 120 125

Val Arg Gly Phe Pro Arg Cys Arg Tyr Val His Lys Ala Gln Gly Thr
130 135 140

Gly Pro Cys Pro Gly Asp Tyr Ala Phe His Lys Asp Gly Ala Phe Phe
145 150 155 160

Leu Tyr Asp Arg Leu Ala Ser Thr Val Ile Tyr Arg Gly Val Asn Phe
165 170 175

Ala Glu Gly Val Ile Ala Phe Leu Ile Leu Ala Lys Pro Lys Glu Thr
180 185 190

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Phe Leu Gln Ser Pro Pro Ile Arg Glu Ala Val Asn Tyr Thr Glu Asn
 195 200 205
 Thr Ser Ser Tyr Tyr Ala Thr Ser Tyr Leu Glu Tyr Glu Ile Glu Asn
 210 215 220
 Phe Gly Ala Gln His Ser Thr Thr Leu Phe Lys Ile Asp Asn Asn Thr
 225 230 235 240
 Phe Val Arg Leu Asp Arg Pro His Thr Pro Gln Phe Leu Phe Gln Leu
 245 250 255
 Asn Asp Thr Ile His Leu His Gln Gln Leu Ser Asn Thr Thr Gly Arg
 260 265 270
 Leu Ile Trp Thr Leu Asp Ala Asn Ile Asn Ala Asp Ile Gly Glu Trp
 275 280 285
 Ala Phe Trp Glu Asn Lys Lys Asn Leu Ser Glu Gln Leu Arg Gly Glu
 290 295 300
 Glu Leu Ser Phe Glu Ala Leu Ser Asn Ile Thr Thr Ala Val Lys Thr
 305 310 315 320
 Val Leu Pro Gln Glu Ser Thr Ser Asn Gly Leu Ile Thr Ser Thr Val
 325 330 335
 Thr Gly Ile Leu Gly Ser Leu Gly Leu Arg Lys Arg Ser Arg Arg Gln
 340 345 350
 Thr Asn Thr Lys Ala Thr Gly Lys Cys Asn Pro Asn Leu His Tyr Trp
 355 360 365
 Thr Ala Gln Glu Gln His Asn Ala Ala Gly Ile Ala Trp Ile Pro Tyr
 370 375 380
 Phe Gly Pro Gly Ala Glu Gly Ile Tyr Thr Glu Gly Leu Met His Asn
 385 390 395 400
 Gln Asn Ala Leu Val Cys Gly Leu Arg Gln Leu Ala Asn Glu Thr Thr
 405 410 415
 Gln Ala Leu Gln Leu Phe Leu Arg Ala Thr Thr Glu Leu Arg Thr Tyr
 420 425 430
 Thr Ile Leu Asn Arg Lys Ala Ile Asp Phe Leu Leu Arg Arg Trp Gly
 435 440 445
 Gly Thr Cys Arg Ile Leu Gly Pro Asp Cys Cys Ile Glu Pro His Asp
 450 455 460

SeqListST25

Trp Thr Lys Asn Ile Thr Asp Lys Ile Asn Gln Ile Ile His Asp Phe
 465 470 475 480

Ile Asp Asn Pro Leu Pro Asn
 485

<210> 84

<211> 487

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Ebolavirus GP

<400> 84

Met Gly Val Thr Gly Ile Leu Gln Leu Pro Arg Asp Arg Phe Lys Arg
 1 5 10 15

Thr Ser Phe Phe Leu Trp Val Ile Ile Leu Phe Gln Arg Thr Phe Ser
 20 25 30

Ile Pro Leu Gly Val Ile His Asn Ser Thr Leu Gln Val Ser Glu Val
 35 40 45

Asp Lys Leu Val Cys Arg Asp Lys Leu Ser Ser Thr Asn Gln Leu Arg
 50 55 60

Ser Val Gly Leu Asn Leu Glu Gly Asn Gly Val Ala Thr Asp Val Pro
 65 70 75 80

Ser Ala Thr Lys Arg Trp Gly Phe Arg Ser Gly Val Pro Pro Lys Val
 85 90 95

Val Asn Tyr Glu Ala Gly Glu Trp Ala Glu Asn Cys Tyr Asn Leu Glu
 100 105 110

Ile Lys Lys Pro Asp Gly Ser Glu Cys Leu Pro Ala Ala Pro Asp Gly
 115 120 125

Ile Arg Gly Phe Pro Arg Cys Arg Tyr Val His Lys Val Ser Gly Thr
 130 135 140

Gly Pro Cys Ala Gly Asp Phe Ala Phe His Lys Glu Gly Ala Phe Phe
 145 150 155 160

Leu Tyr Asp Arg Leu Ala Ser Thr Val Ile Tyr Arg Gly Thr Thr Phe
 165 170 175

Ala Glu Gly Val Val Ala Phe Leu Ile Leu Pro Gln Ala Lys Lys Asp
 180 185 190

Phe Phe Ser Ser His Pro Leu Arg Glu Pro Val Asn Ala Thr Glu Asp
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195

200

205

Pro Ser Ser Gly Tyr Tyr Ser Thr Thr Ile Arg Tyr Gln Ala Thr Gly
 210 215 220
 Phe Gly Thr Asn Glu Thr Glu Tyr Leu Phe Glu Val Asp Asn Leu Thr
 225 230 235 240
 Tyr Val Gln Leu Glu Ser Arg Phe Thr Pro Gln Phe Leu Leu Gln Leu
 245 250 255
 Asn Glu Thr Ile Tyr Thr Ser Gly Lys Arg Ser Asn Thr Thr Gly Lys
 260 265 270
 Leu Ile Trp Lys Val Asn Pro Glu Ile Asp Thr Thr Ile Gly Glu Trp
 275 280 285
 Ala Phe Trp Glu Thr Lys Lys Asn Leu Thr Arg Lys Ile Arg Ser Glu
 290 295 300
 Glu Leu Ser Phe Thr Ala Val Ser Asn Thr His His Gln Asp Thr Gly
 305 310 315 320
 Glu Glu Ser Ala Ser Ser Gly Lys Leu Gly Leu Ile Thr Asn Thr Ile
 325 330 335
 Ala Gly Val Ala Gly Leu Ile Thr Gly Gly Arg Arg Ala Arg Arg Glu
 340 345 350
 Ala Ile Val Asn Ala Gln Pro Lys Cys Asn Pro Asn Leu His Tyr Trp
 355 360 365
 Thr Thr Gln Asp Glu Gly Ala Ala Ile Gly Leu Ala Trp Ile Pro Tyr
 370 375 380
 Phe Gly Pro Ala Ala Glu Gly Ile Tyr Thr Glu Gly Leu Met His Asn
 385 390 395 400
 Gln Asp Gly Leu Ile Cys Gly Leu Arg Gln Leu Ala Asn Glu Thr Thr
 405 410 415
 Gln Ala Leu Gln Leu Phe Leu Arg Ala Thr Thr Glu Leu Arg Thr Phe
 420 425 430
 Ser Ile Leu Asn Arg Lys Ala Ile Asp Phe Leu Leu Gln Arg Trp Gly
 435 440 445
 Gly Thr Cys His Ile Leu Gly Pro Asp Cys Cys Ile Glu Pro His Asp
 450 455 460
 Trp Thr Lys Asn Ile Thr Asp Lys Ile Asp Gln Ile Ile His Asp Phe

465	470	SeqListST25 475	480
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Val Asp Lys Thr Leu Pro Asp
485

<210> 85
 <211> 9
 <212> PRT
 <213> Artificial Sequence
 <220>
 <223> Synthetic H. influenza virus HA peptide
 <400> 85

Tyr Pro Tyr Asp Val Pro Asp Tyr Ala
1 5

<210> 86
 <211> 12
 <212> PRT
 <213> Artificial Sequence
 <220>
 <223> Synthetic Ebolavirus GP peptide
 <400> 86

Thr Gln Val Glu Gln His His Arg Arg Thr Asp Asn
1 5 10

<210> 87
 <211> 40
 <212> PRT
 <213> Artificial Sequence
 <220>
 <223> Synthetic Ebolavirus GP peptide
 <400> 87

Thr His Asn Thr Pro Val Tyr Lys Leu Asp Ile Ser Glu Ala Thr Gln
1 5 10 15

Val Glu Gln His His Arg Arg Thr Asp Asn Asp Ser Thr Ala Ser Asp
20 25 30

Thr Pro Ser Ala Thr Thr Ala Ala
35 40

<210> 88
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Primer

<400> 88
 tctctcctgg ctctcwgctc

SeqListST25

<210> 89
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Primer

<400> 89
 ggcctggact cctctcttct 20

<210> 90
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Primer

<400> 90
 aggtggaaac aggtgactg 20

<210> 91
 <211> 20
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 <213> Artificial Sequence

<220>
 <223> Primer

<400> 91
 ggtggaaaca cggtgagagt 20

<210> 92
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Primer

<400> 92
 tgagtgtggg agtggacttg 20

<210> 93
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Primer

<400> 93
 tgggctcaga ttgattttcc 20

<210> 94
 <211> 15
 <212> PRT
 <213> Mus sp.

<400> 94

SeqListST25

Cys	Ala	Thr	His	Tyr	Tyr	Gly	Pro	Leu	Tyr	Ala	Met	Asp	Tyr	Trp
1				5					10					15

<210> 95
 <211> 15
 <212> PRT
 <213> Mus sp.

<400> 95

Cys	Gly	Val	Gly	Asp	Thr	Ile	Lys	Glu	Gln	Phe	Val	Tyr	Val	Phe
1				5					10					15